

### Testing Completed for Five Multi-Parameter Water Monitors for Distribution Systems

Testing of five multi-parameter water monitors has been successfully completed. The verification test, conducted at the EPA's Testing and Evaluation (T&E) Facility in Cincinnati, OH, assessed the performance of each multi-parameter water monitor using a circulating pipe loop.

The five monitors tested were:



**Technology:** Q45WQ Series  
**Company:** Analytical Technologies, Inc.  
**Address:** 6 Iron Bridge Drive  
Collegeville, PA 19426  
**Phone:** 610-917-0991  
**Fax:** 610-917-0992  
**Web site:** [www.analyticaltechnology.com](http://www.analyticaltechnology.com)  
**E-mail:** sales@analyticaltechnology.com

**Technology:** TitraSip™ SA  
**Company:** Man-Tech Associates  
**Address:** 600 Main St.  
Tonawanda, NY 14150  
**Phone:** 519-763-2145  
**Fax:** 519-763-9995  
**Web site:** [www.mantech-inc.com](http://www.mantech-inc.com)  
**E-mail:** rmenegotto@mantech-inc.com



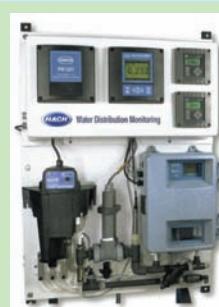
**Technology:** Model WQS  
**Company:** Rosemount Analytical  
**Address:** 2400 Barranca Pkwy.  
Irvine, CA 92606  
**Phone:** 949-757-8500  
**Fax:** 949-863-9159  
**Web site:** [www.emersonprocess.com](http://www.emersonprocess.com)  
**E-mail:** Richard.Baril@EmersonProcess.com

These monitors were required to be able to measure residual chlorine and at least one other water quality parameter, determined by each monitor's capabilities. Other water quality parameters that were measured by the technologies included temperature, pH, conductivity, total alkalinity, turbidity, total organic carbon, and oxidation-reduction potential.



**Technology:** Sentinel™500 Series  
**Company:** Clarion Sensing Systems  
**Address:** 3901 W. 30<sup>th</sup> St.  
Indianapolis, IN 46222  
**Phone:** 317-295-1433  
**Fax:** 317-295-1436  
**Web site:** [www.clarionsensing.com](http://www.clarionsensing.com)  
**E-mail:** clarionsystems@earthlink.net

The verification test evaluated the accuracy of the water quality measurements made by each technology in finished drinking water, the response to changes in the water system because of contamination of the water using four spiked contaminants (*E. coli*, aldicarb, arsenic trioxide, and nicotine), and the durability and ruggedness of each monitor during a 52-day continuous deployment. The Hach technology was also tested for its ability to detect the injection of 13 individually spiked contaminants, as well as whether it correctly identified the injected contaminants. Two identical monitors from each vendor were tested simultaneously to determine inter-unit reproducibility.



**Technology:** Water Distribution Monitoring Panel and Event Monitor™ Trigger System  
**Company:** Hach Company  
**Address:** 5600 Lindbergh Dr.  
Loveland, CO 80538-8998  
**Phone:** 800-227-4224  
**Fax:** 970-669-2932  
**Web site:** [www.hach.com](http://www.hach.com)  
**E-mail:** dkroll@hach.com

A verification report has been prepared for each monitor. The reports are currently undergoing final EPA review and approval and will be available soon on the ETV Web site at: <http://www.epa.gov/etv/verifications/verification-index.html>.



*The AMS Center, which is part of the U.S. Environmental Protection Agency's Environmental Technology Verification Program, verifies the performance of technologies that monitor for contaminants and natural species in air, water, and soil. ETV was established to accelerate the implementation of improved environmental technologies through third-party verification testing and reporting of the technologies' performance. The ETV process provides purchasers and permittees with an independent assessment of the technology they are buying or permitting and facilitates multi-state acceptance. For further information, contact Helen Latham at Battelle, 505 King Ave., Columbus, Ohio 43201-2693; Phone 614-424-4062; Fax 614-424-5601; E-mail [lathamh@battelle.org](mailto:lathamh@battelle.org).*

## ETV Beach Monitoring Test Being Planned

Frequent water quality monitoring of recreational waters is necessary to ensure the public's safety while swimming or fishing. The need to post health warnings and/or close beaches for recreational use is currently determined using methods that provide results at least 24 hours after sample collection.

The evaluation of rapid monitoring technologies for the detection of pathogen-indicating organisms, such as *E. coli* and *Enterococci*, in recreational waters has been an area of high interest to the ETV

AMS Center's Water Stakeholder Committee since 1998.

Until recently, the commercial availability of these technologies has been limited. The AMS Center is now planning a test of rapid beach monitoring technologies for the summer of 2006. The test/quality assurance plan for the verification test, which will include the selection of testing sites and locations, number and types of matrices (e.g., marine and/or freshwater), and verification parameters, is currently under development.

Organizations interested in collaborating with the ETV AMS Center on this verification test should contact Battelle's Verification Test Coordinator, Ann Louise Sumner, at (614) 424-3973 or [sumnera@battelle.org](mailto:sumnera@battelle.org).

Opportunities for collaboration include providing access to test sites, reference analyses, test site operators, and/or co-funding for the verification test.

Technology vendors who are interested in participating are also encouraged to contact Dr. Sumner.

## Mobile Mass Spectrometer Tested

Mobile mass spectrometers are a subset of mass spectrometers that include portable systems (i.e., those able to be carried by the user) and field-transportable systems (i.e., systems modified specifically so that they may be able to be taken outside of a fixed laboratory setting). This portability offers an advantage for first-responders and other users that may be seeking to obtain chemical information when time, sampling, and other limitations require analysis outside of the typical laboratory setting.

Verification testing of Constellation Technology Corporation's Model CT-1128 Gas Chromatograph-Quadrupole Mass Spectrometer was completed in November. The technology was tested for its ability to detect and quantify volatile organic compounds, pesticides, and chemical agents in a variety of water matrices, including drinking water from four geographically-dispersed locations. Testing occurred in laboratory and non-laboratory (i.e., field) settings.

The draft report is expected to be completed in January.



**Constellation Technology Corporation's Model CT-1128 Gas Chromatograph-Mass Spectrometer**

## Upcoming Events

### November

**29-Dec. 1** SERDP/ESTCP Partners in Environmental Technology Symposium & Workshop, Washington, DC

**January  
25-27**

Vapor Intrusion: The Next Great Environmental Challenge, Philadelphia, PA

**February  
19-22**

2006 WEF/AWWA Joint Management Conference, Salt Lake City, UT